acne have been reported. Certain other diseases, such as purpura and scurvy, have been added. As to the reports of the condition following acute rheumatic fever one questions if some of them may not have been instances of acute arthritis deformans, wrongly diagnosed. As to the exact process in these we cannot decide as yet, but the possibility of a multiple causal agency opens up a fruitful line for further work.

Reference has already been made to the similarity in the clinical features between the cases of typhoid spondylitis and those associated with arthritis deformans. The essential conditions seem to be the same and the pressure sign also. From radiograms it would be impossible to distinguish one from the other.

Conclusions. 1. In certain instances of typhoid spondylitis there are definite bony changes in the vertebræ.

2. The general features of the condition suggest the probability of organic changes in the spine of some degree being a usual occurrence.

3. The similarity of the changes found in typhoid spondylitis and those in the spondylitis found in other infections, especially arthritis deformans, suggest that the latter may be due to various infective agents.

THE VALUE OF THE DIFFERENTIAL LEUKOCYTE COUNT IN DIAGNOSIS.[1]

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A study of the results obtained from complete blood examinations in some 8000 cases in private practice in the course of a number of years, rather than theoretical reasoning, led to the conviction that the differential leukocyte count is a factor of prime importance in the diagnosis and prognosis of most inflammatory lesions, and that with a knowledge of its details, the degree of leukocytosis has a significance not appreciated otherwise.

In February of last year, in a paper read before the Surgical Section of the New York Academy of Medicine, I reviewed data from some 1400 surgical cases, which seemed to justify conclusions briefly as follows: The increase in the relative number of polynuclear cells is an indication of the severity of the toxic absorption, and the degree of leukocytosis is an evidence of the body resistance toward the infection. Furthermore, it was found that within reasonable limits the figures obtained would justify an inference as to the probable presence or absence of a purulent exudate. Purulent exudates were rarely if ever present with low polynuclear percentages, irrespective of the height of the leukocyte count; while very high polynuclear percentages almost invariably indicated their presence, even if the total leukocyte count was low. Since the publication of that communication many surgeons have tabulated the figures obtained in inflammatory cases, and find that they bear out my own observations.

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[1] Read at the meeting of the American Association of Pathologists and Bacteriologists, Baltimore, May 18, 1906.

C. L. Gibson[1] has compiled results obtained in some 200 cases at St. Luke's Hospital. In this article he advocates the use of a standard chart, which I can heartily endorse; by means of it the important factor of the relation between polynuclear increase and leukocyte increase is graphically demonstrated. The higher the polynuclear percentage as compared to the leukocyte count, the greater the probability of a purulent exudate. Gibson's conclusions are as follows: The differential blood count and its relation to the leukocytosis is the most valuable diagnostic and prognostic aid in acute surgical diseases furnished by any of the methods of blood examination. It is of value chiefly in indicating fairly consistently the existence of suppuration or gangrene, as evidenced by an increase of the polynuclear cells disproportionately high as compared with the total leukocytosis. The greater the disproportion the surer are the findings, and in extreme disproportions the method has proved itself practically infallible. As the relative disproportion between the leukocytosis and the percentage of polynuclear cells is of so much more value than the findings based on a leukocyte count alone, this latter method should be abandoned in favor of the newer and more reliable procedure.

H. C. Taylor[2] has made a study of several hundred gynecological cases at Roosevelt Hospital along these lines. His conclusions are practically the same.

J. F. McKernon has given this method of examination a careful trial in suppurative conditions associated with or following middle ear disease, and is also enthusiastic on this adjunct in diagnosis and prognosis. Time does not permit my giving a detailed account of the results in some 200 hospital and private cases that he kindly placed at my disposal, but they will be found in a paper which he read before the British Medical Association this year. In a general way I may add that suppurative bone processes do not give us figures as high as we generally see in suppurative conditions in the soft tissues, probably on account of slower toxic absorption.

This clinical material in a broad way substantiates fully my original claims. That cases are encountered which seem to belie this principle is not open to question, but careful analysis of the conditions present usually explains the apparent divergence, and I can but voice the conclusion that continued observation strengthens rather than weakens my belief that the differential count is a valuable adjunct in surgical diagnosis and may present diagnostic and prognostic data at a time when the clinical picture is confusing. I grant that the procedure is still crude and that many refinements are necessary to make it as useful as I should like, but this is only a question of research.

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[1] Value of the Differential Leukocyte Count in Acute Surgical Diseases, Annals of Surgery, April, 1906.

[2] A paper read before the New York Obstetrical Society several months ago and as yet unpublished.

As regards disappointments and failures encountered in the application of this principle, I may say children do not give the uniform results obtained in adults; to begin with, the normal polynuclear percentage is a more variable quantity, and when children are severely infected it seems that a drop in the polynuclear percentage may be due to lack of ability to absorb additional toxic material, thus indicating a graver rather than an improved condition.

When pus is so confined that no toxic absorption occurs, or when a purulent exudate is the result of tuberculous or typhoid infection alone, there is no leukocytosis and no polynuclear increase. Experience also teaches that a mixed infection with (or following) tubercle bacilli or typhoid bacilli does not show the high polynuclear percentages obtained in primary staphylococcic or streptococcic infection. It is also found that the exact nature of the infection has a direct bearing on the degree of polynuclear increase, some organisms causing higher percentages than others, everything else being equal. A very small percentage of cases of error remains unexplained, and in these one must conclude that we are led astray by drawing inferences from a specimen which does not happen to be a proper indicator of the circulating blood, even if the technique is as good as understood.

From my experience with the method I believe that it merits every effort in the direction of improvement and that the disappointments encountered should stimulate such efforts rather than tend to condemn the procedure.

THE EARLY DIAGNOSTIC SIGNS OF INSULAR SCLEROSIS, WITH A CLINICAL REPORT OF FOUR CASES.

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Perhaps there is no disease of the nervous system concerning the pathological anatomy and symptoms of which the average medical student is more ready to answer than insular sclerosis. He